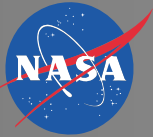# Technology Infusion Working Group Feedback
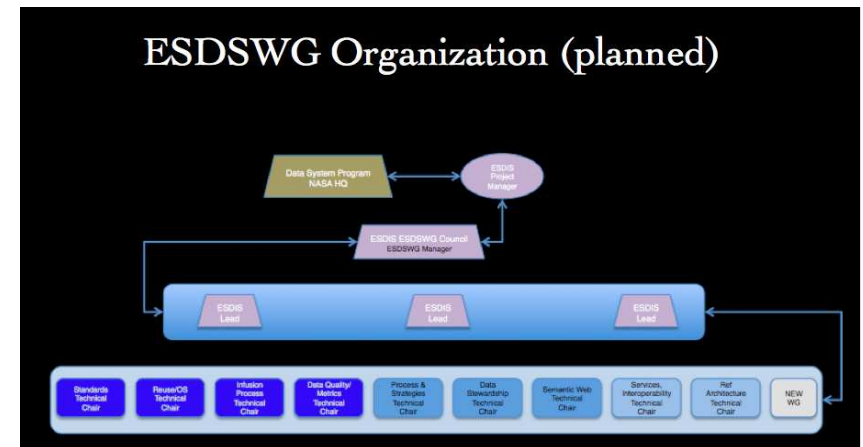
Earth Science Data Systems Working Group Meeting
November 3, 2011
Newport News, VA

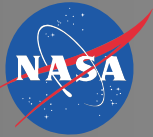**Working Group Co-Chairs:**
Karen Moe, NASA/ESTO
Brian Wilson, NASA/JPL

- Suggest taking next few months to transition
  - Infusion Planning?
  - Promote Data Stewardship to WG
  - Retire Processes & strategies?
  - Recast SIO/Services Interop to Technology Interoperability WG
  - Merge Semantic Web into Interop?
  - Or evolve to Semantic Tech WG?

ESDSWG Organization (planned)

- Continuing Need for cross-WG coordination
  - Articulating ESDS user challenges, assessing emerging technology, doing gap analysis, identifying low-hanging fruit solutions

- Options
  - Future role for Infusion Planning WG?
  - Move functions to cross-WG Ref Architecture WG?
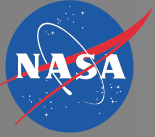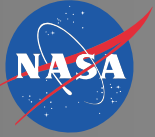 - Create a new brainstorming/think tank forum?

Technology Infusion Process

- Monthly, 1-2 talks via WebEx
  - Modeled after successful ESIP Information Technology and Interoperability Committee rants
- Goal: disseminate info about new / useful technologies throughout ESDSWG
- Advertise to include full ESDS community
  - Data Centers
  - Missions
  - ACCESS & Measures
  - Other interested organizations as appropriate
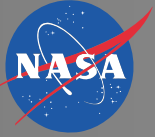- Curated by Colloquium Committee

- Breakout summary
  - NASA Version of PCCS
    - Rama presented status and timeline
    - Question on the table is whether ESDSWG should review and/or submit a tech note to SPG
  - What is NASA doing with DOIs
    - John Modes presented plans re DOIs
    - Very many questions about the process – many of which are unresolved
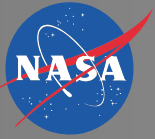 - Only 3 minutes remain for planning

- Consensus was that Data Stewardship should be its own working group.
  - Over 20 people expressed interested in joining
- Planning for upcoming chair
  - Need to develop charter
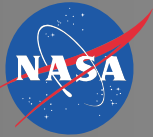 - Select chair
  - Develop rest of plan for the year

- Emphasis areas we've covered that are not covered by others:
  - Capability Vision: at plateau now, but benefits from occasional maintenance
  - Technology Infusion – periodically identify, assess what's new, relevant, esp. noteworthy
  - Technology Readiness Levels
  - Focus on synthesizing, consolidating key Best Practices
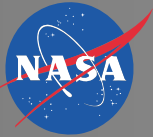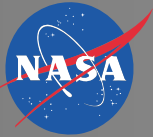- Issue: how best to partition coverage of these areas, assuming we retain them?

- Reorganization
  - Want joint meetings/telecons for general TIWG topics. Not full WG which creates barriers and overhead.
  - Strawpoll of those in room: Most but not all want to merge semantic web with interoperability. TBD.
  - One person suggested renaming SIO to Technology Interoperability Working Group (TIWG)
- Concerns
  - DAACs and Mission Projects should have funded representatives at telecons?
  - Desire for more community input
- Goals
  - Foster more interoperability. Have a look at Interoperability Readiness Level.
  - Identify actionable recommendations to advance interoperability
  - Facilitate more infusion of interoperability technologies

- Potential Activities
  - Semantic technologies
  - Addressing Pain Points
  - Collection of DAAC User WG pain points
  - Some joint effort ideas
    - Identifiers for everything
    - Standards and implementations
    - Reference Architecture
    - Provenance
  - NASA-focused Discovery. Write RFC for SPG.
  - Capability/Technology/Strategies concept mapping
  - Impact nuggets: does not necessarily have to be a tangible products.

- Intro. to Semantic Web (orientation for "newbies")
  - See tutorial materials on the ESIP Cluster page

- Discussion of the technology stack
  - Triple stores, SPARQL query servers, reasoners, rules
  - What's missing?
  - What should be target for the testbed and future tutorials?

- On-going work (sub-group & Cluster)
  - Organizing demos for Jan. 2012 ESIP Federation meeting
  - Ontology development: preservation, provenance

- Planning for 2012
  - Should Semantics go forward as a Working Group?
  - What should be in the work plan? Deliverables?

- State of the Community
  - Mixture of beginners & advanced practitioners
  - Semantics part of many projects, maturing applications
  - But still a need for tutorials and a testbed to evaluate tools
- Should "Semantics" go forward as a Working Group?
  - Do we have enough leaders & workers for four Tech. WG's?
  - Overlap between Sem. and Interoperability WG's
  - Realignment of WG's: Need to recruit more participants to tech.
- Develop Work Plan
  - Demo these capabilities . . . (e.g. smart search, data integration)
  - Develop/extend these ontologies . . . (e.g. preservation, provenance)
  - Formulate deliverables for a two-year "push"
- Semantic technologies need to be in our toolbox
  - Use sem. mediation, text understanding to solve interoperability problems